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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,288	12/03/2001	R. Andrew Wood	1100.1138101	4991

128 7590 09/13/2002

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EXAMINER

MERCADO, JULIAN A

ART UNIT PAPER NUMBER

1745

DATE MAILED: 09/13/2002

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/007,288

Applicant(s)

WOOD ET AL.

Examiner

Julian A. Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-47 and 49 is/are allowed.
- 6) ☐ Claim(s) 48 and 50-55 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 48 and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Seefeldt et al. (U.S. Pat. 5,736,430).

Seefeldt teaches providing a first wafer [18], forming pump-out ports [62] therethrough and making a recess in a first side of a second wafer [8], (col. 4 line 65 et seq.):

65 In the illustrated embodiment, the wafer 8 is prepared for
implantation of the buried p-type layer 50 by initially
forming a screening layer of SiO₂ on the upper surface 17 of

the wafer 8.

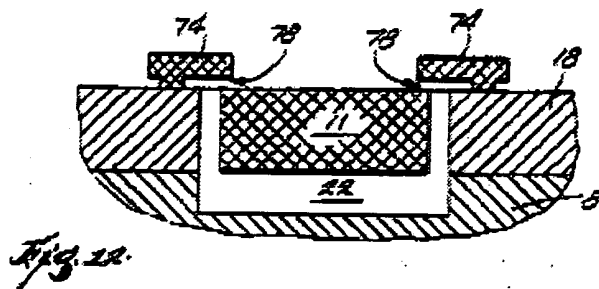
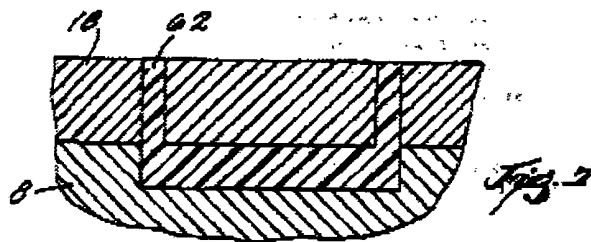
Art Unit: 1745

(col. 5 line 49-55):

The p-type sinkers 58 (FIG. 5) are implanted in the n-type epitaxial layer 18 and into electrical connection with the p-type layer 50. In the illustrated embodiment, the n-type epitaxial layer 18 is prepared for receiving the p-type sinkers 58 by partially oxidizing the n-type epitaxial layer 18 to form a screening layer of SiO_2 having a thickness of about 500-1500 angstroms. The SiO_2 can be formed by first

Note that in Figure 7, the pump-out ports in the first wafer are etched so as to make a recess [22] in the second wafer [8], as shown in Figure 12. As can be appreciated in viewing Figures 7 and 12, the first and second wafers are positioned in mutual contact so as to form a chamber defined partially by the recess [22], (col. 6 line 62-63):

The porous silicon dioxide in the precavity region 62 is removed or dissolved by etching to form the cavity 22 (FIG. 12). Any suitable etchant may be employed. In the illustrated



As can be appreciated from the Figures, the chamber thereby formed is in fluid communication with the pump-out ports of the first wafer. The pump-out ports are sealed at their openings [78] so as to seal the chamber, (col. 7 line 12-14):

The cavity 22 is sealed and evacuated in a suitable manner. It is preferred to evacuate the cavity in order to provide a vacuum for absolute pressure sensing. In the

(col. 7 line 22-24):

channels 78 substantially closes the etch channels 78. The SiO₂ layers 82 are further sealed by depositing a secondary sealing layer 86 (FIG. 13) of a secondary sealing material.

Thus, the claims are anticipated.

Double Patenting

Claims 50-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,359,333 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '333 Patent similarly claims a wafer pair having a first wafer, a second wafer, a plurality of ports through the second wafer, and a sealing ring between the first and second wafer so as to form a chamber.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

Art Unit: 1745

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Allowable Subject Matter

Claims 1-47 and 49 are allowed.

The following is an examiner's statement of reasons for allowance: the Prior Art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding the method for making a wafer-pair having deposited layer plugged seal chambers, wherein the chambers enclose a plurality of devices formed by the instant depositing, patterning, and removing portions of layers, and wherein the chamber is hermetically sealed by a sealing ring and effectively forming the instant bonded together set of wafers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the

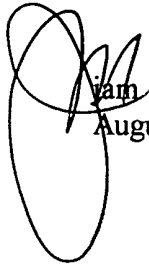
Application/Control Number: 10/007,288

Page 6


Art Unit: 1745

organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



August 8, 2002



Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700